

2 General Information

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This manual covers the general servicing of the 2008 Balance hybrid-electric vehicle

2.1 Vehicle Description

Azure Dynamics has released into service a model year 2008 Ford E-450 Balance hybrid-electric Vehicle. These vehicles function in the same manner as a non-hybrid vehicle except as noted in this manual.

This vehicle is built on a 2008 Ford E-450 commercial stripped chassis with a modified drive train and modified electronic system controls.

2.2 VIN

There are no characters in the VIN to identify it as a hybrid vehicle.

2.3 Welding on the Vehicle

Any electrical welding on the vehicle should be avoided if possible. If electrical welding must be performed, follow the guidelines from the Ford Service Manual.

In Addition to following the Ford Service manual, the following hybrid components must be disconnected before welding to prevent damage.

- VCU: C308S, C309S and C310S
- Low voltage (12 volt) battery: 12 volt battery terminals
- High voltage battery pack control connector : C053S
- Control connector on the ISG (integrated starter generator) DMoC : C251S, C252S, C253S

- Control connector on the traction motor DMoC : C153S, C154S & C155S
- Control connector on the electrical power assist DMoC : C156S , C158S & C338S
- DC/DC converter control connector: C060S
- Cab harness: C020S
- Disconnect FORD PCM. Also refer to Ford service manual instructions for welding on a vehicle.

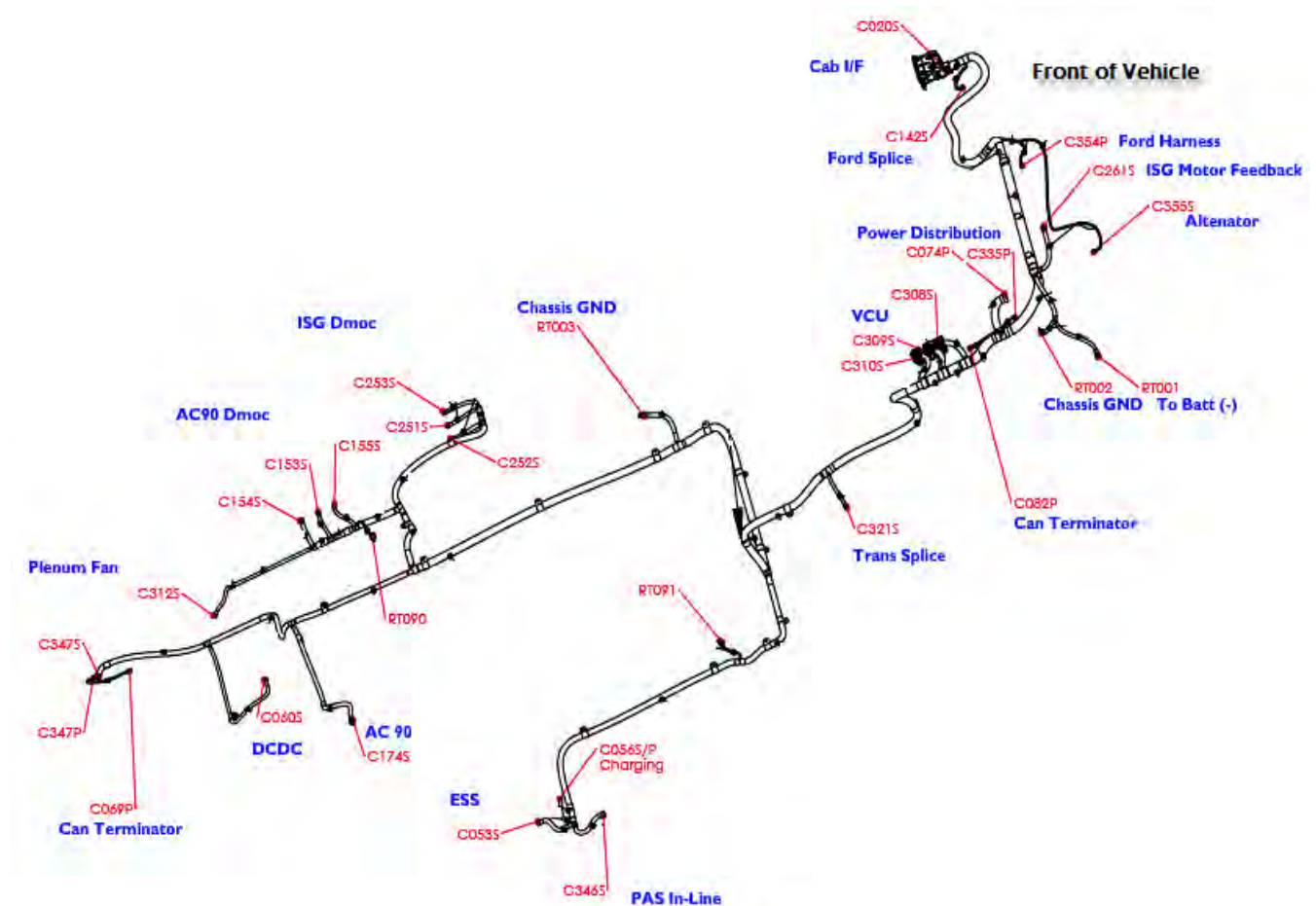


Figure 2: Location of Components and Electrical Connectors

2.4 Lifting and Jacking

Refer to Ford 2008 E-450 Service Manual for Ford recommended lifting locations.

When lifting the vehicle, do not place the jack or hoist on any of the high voltage electrical components or orange cables.

CAUTION

When jacking or lifting a vehicle, do not place the jack or hoist on any of the hybrid high voltage components or cables.

2.5 Towing

When towing the vehicle, follow the guidelines found in the Ford E-450 Owner's Guide for more information.

Inform the tow truck operator that chains or straps are not to be attached to, or placed over, high voltage components or cables. The high voltage cables can be identified by the bright orange-colored loom (refer to illustration)

CAUTION

Never place chains or straps on or across any high voltage components or orange cables.



Figure 3

2.6 Low Voltage Charging

The 12 volt battery can be charged the same as non-hybrid vehicles. Do not use 24 volts to jump start the vehicle.

2.7 Body Shop Activity

- When baking Azure hybrid vehicle, do not expose it to prolonged temperatures above 65°C. This will cause the high voltage battery pack to release hydrogen.

CAUTION



Do not bake or expose Azure Hybrid vehicles to temperatures above 65° C.

- Follow proper welding procedures as outlined above
- If any hybrid component is physically damaged, it must be replaced.